



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : George H. Beall and David L. Weidman

Appl. No. : 09/203,166

Filed : December 1, 1998

For : AATHERMAL OPTICAL DEVICE

Examiner : H. Ngo

Group : 2874

#5

Beta

May 12, 99

Commissioner of Patents and Trademarks
Washington, D.C. 20231

RESPONSE TO RESTRICTION REQUIREMENT AND
SUBMISSION UNDER 37 CFR §1.607(a)

I. Introduction

This is in response to the restriction requirement dated March 25, 1999.

No extension of time is believed to be necessary for the filing of this paper, but if such an extension of time is required, applicants request that this be considered a petition therefor. The Commissioner is hereby authorized to charge any fees which may be required for such an extension to Deposit Account No. 11-1158.

In reviewing the Office Action Summary (PTO Form 326) for the March 25th restriction requirement, it was noted that the box indicating acknowledgment of applicants' claim for domestic priority under 35 USC §119(e) was not checked. Applicants assume that their claim for priority to provisional application number 60/010,058, filed January 16, 1996, is of record in this application, but if not, such action is respectfully requested.

II. Response to Restriction Requirement

The March 25th restriction requirement was directed to applicants' Claims 1-40. Those claims, however, were canceled by the Preliminary Amendment filed with this application and were replaced at that time by pending Claims 41-61.

The restriction requirement was between method and apparatus claims. Claims 41-61 are all apparatus claims, and thus, to the extent an election is still required, applicants elect apparatus claims for further prosecution in this application.

III. Submission Under 37 CFR §1.607(a)

As discussed in the December 1, 1998 Preliminary Amendment, this application has been filed for the purpose of provoking an interference with Fleming et al., U.S. Patent No. 5,694,503, a copy of which was submitted with applicants' Information Disclosure Statement filed on January 14, 1999.

In connection with their request for such an interference, applicants submit the following pursuant to the provisions of 37 CFR §1.607(a).

**(1) Identification of the Patent With Which
Applicants Seek an Interference – 37 CFR §1.607(a)(1)**

The patent with which applicants seek an interference is Fleming et al., U.S. Patent No. 5,694, 503 (the "503 patent").

**(2) Presentation of a Proposed Count For
the Interference – 37 CFR §1.607(a)(2)**

Applicants propose the following count for the interference:

In an apparatus having a fiber grating
affixed to a device where the device provides
thermal compensation to the fiber grating, the
improvement wherein the device comprises a
material having a negative coefficient of thermal
expansion.

claim 6

This proposed count satisfies the requirements of 37 CFR §1.606 since it is broader than any of the claims of the '503 patent.

**(3) Identification of At Least One Claim
of the '503 Patent Which Corresponds to
the Proposed Count – 37 CFR §1.607(a)(3)**

At least Claim 1 of the '503 patent corresponds to the proposed count.

**(4) Identification of At Least One Claim
of This Application Which Corresponds
to the Proposed Count – 37 CFR §1.607(a)(4)**

At least Claims 41 and 61 of this application correspond to the proposed count.

**(5) Explanation Of Why Claim 1 of '503 Patent And
Claims 41 and 61 of This Application Correspond
To the Proposed Count – 37 CFR §1.607(a)(4)**

Claim 1 of the '503 patent and Claims 41 and 61 of this application correspond to the proposed count for the following reasons.

Claim 1 of the '503 patent and Claim 41 of this application are identical. Both claims correspond to the count since they define apparatus in which a fiber grating is affixed to a device that (1) provides thermal compensation for the grating and (2) comprises a material having a negative coefficient of thermal expansion (negative CTE), as called for by the proposed count.

The terminology differences between these claims and the proposed count do not represent patentable differences. Thus, a "refractive index grating" is a "fiber grating," such gratings by definition have "a length and a reflection wavelength λ at a given temperature within an operating temperature range," and a "support member having a negative coefficient of thermal expansion selected such that λ is substantially temperature independent over said operating temperature range" is a device that (1) provides thermal compensation and (2) comprises a material having a negative CTE, as called for by the proposed count.

In each case, the terminology of the count is at least as broad as the terminology of the claim. This is as it should be since it allows both parties

and, in particular, allows applicants the opportunity to present their best proofs of priority. See, for example, Kondo v. Martel, 220 USPQ 47, 49 (Bd. Pat. App. & Int. 1983). The use of broader terminology in the proposed count does not result in the count defining a separate patentable invention from that defined in Claim 1 of the '503 patent and Claim 41 of this application.

Claim 61 of this application corresponds to the proposed count since it and the count are identical.¹

**(6) Application of the Terms of Claims 41 and 61
To Applicants' Disclosure – 37 CFR §1.607(5)**

The terms of Claim 41 are supported by applicants' disclosure as follows:

Claim Term	Application of Claim Term to Applicants' Disclosure
An article comprising	Applicants' optical fiber grating device 20 is an article. See, for example, applicants' Figure 1.
an optical fiber with a refractive index grating having a length and a reflection wavelength λ at a given temperature within an operating temperature range;	As stated at page 9, lines 7-8, of applicants' specification, applicants' optical fiber grating device 20 comprises an "optical fiber 24 having at least one UV-induced reflective grating 26 written therein." As described at page 11, lines 12-14, of applicants' specification, the grating can be formed by stripping a length of coating

¹ The identity of applicants' Claim 61 with the proposed count is another reason why the proposed count should be adopted as the count for the requested interference with the '503 patent. As stated in Section 2309.01 of the MPEP: "A count should normally be sufficiently broad as to encompass the broadest corresponding patentable claim of each of the parties."

Claim Term	Application of Claim Term to Applicants' Disclosure
	from the fiber and then exposing the stripped fiber to laser radiation. As shown in, for example, applicants' Figure 8, the grating has a reflection wavelength λ at a given temperature within an operating temperature range, e.g., applicants' grating has a reflection wavelength of 1565.5 nm at 20°C.
wherein the optical fiber is attached to a support member,	As shown in, for example, applicants' Figure 1, applicants' optical fiber 24 is attached to a support member 22.
said support member having a negative coefficient of thermal expansion selected such that λ is substantially temperature independent over said operating temperature range.	As discussed at, for example, page 9, lines 6-7, of applicants' specification, the support member is composed of "a negative expansion material." As shown by, for example, the upper curve of applicants' Figure 8, the negative expansion material is selected such that the reflection wavelength λ is substantially temperature independent over the grating's operating temperature range.

The terms of Claim 61 are supported by applicants' disclosure as follows:

Claim Term	Application of Claim Term to Applicants' Disclosure
In an apparatus having a fiber grating affixed to a device where the device provides thermal compensation to the fiber grating,	As shown in, for example, applicants' Figure 1, applicants' apparatus 20 has a fiber grating 26 affixed to a device 22 that provides thermal compensation to the fiber grating.

Claim Term	Application of Claim Term to Applicants' Disclosure
the improvement wherein the device comprises a material having a negative coefficient of thermal expansion.	As discussed at, for example, page 9, lines 6-7, of applicants' specification, device 22 is composed of "a negative expansion material," i.e., a material having a negative coefficient of thermal expansion.

Of the remaining claims of applicants' Preliminary Amendment, Claims 50-59 are copies of various of applicants' original claims and use exactly the same terminology as applicants' specification. Claim 60 is a modified form of Claim 54 and also uses the terminology of applicants' specification. Claims 42-50 correspond to Claims 2-8 and 13 of the '503 patent. Exhibit A hereto is an annotated copy of these claims showing how their terminology is supported by applicants' disclosure.

(7) Explanation of How the Requirements of 35 USC §135(b) Are Met – 37 CFR §1.607(6)

The requirements of 35 USC §135(b) are met for Claims 41 and 61 since, among other things, these claims were filed in this application on December 1, 1998, i.e., within one year of the December 2, 1997 issue date of the '503 patent.

IV. Conclusion

In view of the foregoing, applicants respectfully submit that this application is in condition for the declaration of an interference with the

'503 patent with the count of the interference being the proposed count set forth above. Early action is respectfully requested.

Respectfully submitted,

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